LEADERSHIP STYLES OF HOSPITAL PHARMACY DIRECTORS IN TAIWAN

by

Tzay-Huar Hong

A thesis submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Master of Science

Department of Pharmacy Practice

The University of Utah

August 1987

THE UNIVERSITY OF UTAH GRADUATE SCHOOL

SUPERVISORY COMMITTEE APPROVAL

of a thesis submitted by

Tzay-Huar Hong

This thesis has been read by each member of the following supervisory committee and by majority vote has been found to be satisfactory.

July 30, 1987

Linda M. Strand

July [illegible] 1987

July 30, 1987

Peter C. Morley

THE UNIVERSITY OF UTAH GRADUATE SCHOOL

FINAL READING APPROVAL

To the Graduate Council of The University of Utah:

I have read the thesis of [redacted] in its final form and have found that (1) its format, citations, and bibliographic style are consistent and acceptable; (2) its illustrative materials including figures, tables, and charts are in place; and (3) the final manuscript is satisfactory to the Supervisory Committee and is ready for submission to the Graduate School.

[redacted]
Date 30, 1987

[redacted]
Member, Supervisory Committee

Approved for the Major Department

[redacted]
David B. Roll
Chairman/Dean

Approved for the Graduate Council

[redacted]
B. Gale Dick
Dean of The Graduate School

ABSTRACT

Based on the study of leadership in management science, the purpose of this study is to describe the leadership styles of hospital pharmacy directors in Taipei, Taiwan.

The Leader Effectiveness and Adaptability Description (LEAD) instrument was used to characterize the leadership styles of these directors. According to the Situational Leadership Thoery, the dominant and supporting styles, the style range, and the style adaptability of each director can be described. Some background factors in each hospital were collected in order to study the relationship between leadership style and these factors.

The results of this study were based on the responses from 15 participating hospital pharmacy directors and 42 participating pharmacists. The most frequent dominant style used by hospital pharmacy directors in the Taipei area was high task - high relationship. It shows in the results that the female directors tend to be more concerned about the relationship with their subordinates than are the male directors. It also shows that the directors who have a higher educational degree tend to use a leadership style more task-oriented and less people-oriented.

For the directors who are concerned about the effectiveness of their department, this study might serve as an initiative for them to assess their management practice.

CONTENTS

LIST OF TABLES

LIST OF FIGURES

ACKNOWLEDGMENTS

To my parents and my husband, with appreciation, for their support both financially and spiritually. Special thanks to the committee members and Dr. Joe Bentley for their help and guidance.

Finally, I thank some of my friends for their constant encouragement whenever I felt frustrated. Their friendship made the whole process of writing the thesis easier.

CHAPTER I

INTRODUCTION

It was not until the year 1821 that the word "leadership" appeared in the English language. It then took about 100 years before social scientists realized the importance of understanding the phenomenon of leadership. Researchers have worked hard in the last 50 years to search for answers to how people become leaders, how they affect group performance, and what makes for leader effectiveness.

This research is conducted in Taiwan, however, so it is important to understand the meaning of leadership in the Taiwanese context. In the Chinese language, "leadership" has existed for thousands of years. Moreover, it is believed that how people think and behave is based on their beliefs, no matter which country. If this is true, then to understand particular culturally-based belief systems, it is necessary to understand leaders. Leadership in Taiwan is meaningless without mention of Confucianism, which has had the most important influence on the beliefs of the great majority of the Chinese people. There have also been other beliefs and teachings in Chinese society: Daoism, Buddhism, and Christianity. But, their influence on the people's beliefs is not as significant and enduring as Confucianism.

Confucius was born in about 551 BC, and died in 479 BC. He lived at the

end of the period called the 'Epoch of Spring and Autumn', approximately from 722 to 484 BC, in which the states of the old empire were fighting for supremacy. This chaotic period led many thinkers to seek primary principles of social order and harmony. Confucius was a scholar who wandered about from state to state trying to find employment and to convince rulers of the right way to govern.

Confucianism exercised the most dominant and enduring influence, not only on Chinese political thought, but also on Chinese conduct in everyday life. The Chinese term for Confucianism is 'ru' which means gentle, elegant, smooth, and peaceful life style. It seeks a harmonious order in society and keeps the right relationships among people.

There are five relationships mentioned by Confucius, of which only the relationship between friends is equal. The other four relationships are all hierarchial: between ruler and ruled; between father and son; between husband and wife; and between elder and younger brothers. It is not to say that the person with superior position can give commands and use the position of power as he or she wishes. Confucianism was not merely authoritarian, or a doctrine of arbitrary rule. It was required that rulers govern their people in a benevolent, righteous, and proper way; otherwise they would lose the support of their people. His immediate contemporaries were not convinced by his teachings and sayings, but generations of Chinese people have since embraced these Confucian teachings.

Generally speaking, the hierarchial system still exists in both Mainland China and Taiwan, but not as much as several hundred years ago because of the changes in society and its belief systems.

Introduction to Taiwan

Taiwan is an island located in the southeastern sea of China, at approximately 120º degrees east longitude and 23º degrees north latitude. The total land area is about 14,000 square miles, with 245 miles in length and 90 miles in width. Hills and mountains cover two-thirds of the island. At the end of 1984, the population was 19 million, and was relatively young. In 1983, 31% were under the age of 14 years, and 5% were above the age of 65 years.[1]

Taipei, the largest city in Taiwan, is a special municipality, and as such, has the same status as a province. It is not only the administrative seat of the government of the Republic of China, but also the principal cultural, economic, and transportation center. At the end of 1984, the population density in Taipei was one of the highest in the world, with 23,000 persons per square mile.[1]

The Department of Health (DOH) of the Executive Yuan (the Cabinet) is the highest health authority of the nation. It has five technical bureaus: Bureau of Medical Affairs, Bureau of Drugs, Bureau of Food Sanitation, Bureau of Disease Control, and Bureau of Public Health. There are also secretarial and other miscellaneous offices. Those bureaus and offices plan, supervise, assist, and coordinate the health programs throughout the country. According to the data reported by the DOH in March, 1987, the supply of pharmacists in Taiwan had far exceeded the identified need. The number of licensed pharmacists at the end of 1986 was 15,170, which is enough to fulfill the need of pharmacists until the year 2000. [Based on the calculation reported by the World Health Organization (WHO), the number of pharmacists needed in a developing country is about one pharmacist per

1667 persons. By the year 2000, the total population in Taiwan is estimated to reach 22,785,000; thus the number of pharmacists needed will be 13,671.][2] It was recommended by the supervisory committee of the DOH that emphasis should be placed toward improving the quality of existing and future pharmacists, and not just increasing the quantity of pharmacists.

Problem Statement

The major tasks performed by hospital pharmacists in Taiwan are dispensing and distribution. Only a few hospitals have a unit-dose system, an information center, a consulting pharmacist, and clinical services. Pharmacists are told not to provide any information about drugs to the patient except drug usage. The pharmacists have done what they were told to do for years. Gradually, the image of pharmacists has become a group of people doing nothing but counting and pouring. If counting and pouring were taken away from the pharmacists, there would be nothing left for them.

In Taiwan, most directors of hospital pharmacies have been promoted from senior pharmacist, or chosen from among those persons who had the highest educational degree. Their styles of hospital pharmacy management are based primarily on their beliefs and past experience. Since most pharmacists believe that harmonious order in a group is very important, they usually accept the rules and atmosphere in their working environment without resistance. If conflict between personal needs and departmental goals should arise, pharmacists seldom assign priority to their personal job expectations. The excess supply of pharmacists is another reason that pharmacists are encouraged to stay at their present job, even though it may

not be the best choice. Thus, the authoritarian structure of management is much easier to implement under such circumstances. Problems, such as reluctance to take responsibilities, job dissatisfaction, and frustration are associated with the authoritarian structure of management.[3]

Moreover, many pharmacy directors have little chance to expose themselves to management science. A large majority of these directors are unable to recognize and identify an existing management problem in their departments. This makes it difficult, if not impossible, to provide effective leadership to their staff. Thus, the director plays a very important part in developing the management style of hospital pharmacy.

Purpose of the Research

Based on the study of leadership in management science, the purpose of this study is to describe the leadership styles of hospital pharmacy directors in Taipei, Taiwan. In Taiwan, there have been researchers studying leadership in the fields of education, politics, and the military, but none in pharmacy practice. Through understanding the leadership styles exhibited by the hospital pharmacy directors in the Taipei area, an attempt was made to initiate a new direction in the pursuit of problems listed in the last section.

A study by Parrett et al. examines leadership styles used by directors in U.S. hospital pharmacies.[4] This study found that most hospital directors perceived their leadership style as highly relationship- oriented and highly task-oriented. It was expected that research focused on the directors of Taiwan would produce similar results to those found by Parrett et al..

In addition to this, background information such as the type of hospital,

number of patient beds, staff size, gender and age of the director, educational degree of the director, and the amount of time the director has been at his or her present job was collected. These factors may have a significant influence on a director's leadership style. The relationship between the leadership style of the directors and these factors is discussed in Chapter V.

Definition of the Terms

Leader vs manager

There are as many definitions of leadership as there are definitions of leaders and managers. Researchers have tried to find a clear boundary to differentiate leaders from managers. Abraham Zaleznik indicates that leaders are of a psychologically different type than managers; they differ in motivation, personal history, and in how they think and act.[5] Managers tend to adopt impersonal, if not passive, attitudes toward goals which arise out of necessities rather than desires; and they are deeply embedded in the history and culture of the organization. Leaders adopt a personal and active attitude toward goals. They are proactive instead of reactive, shaping ideas instead of responding to them. Managers relate to people according to the role they play in a sequence of events while leaders relate in more intuitive and empathic ways.

Roger Plachy's distinction between leaders and managers is based on needs and goals.[6] He indicates that representing the needs and goals of individuals is leadership, while representing the needs and goals of the organization is managership.

Arthur Jago indicates that the difference between leadership and management is the use of power.[7] He asserts that leadership does not involve the use of force, coercion, or domination; and is not necessarily implied by the use of such titles as manager, supervisor, or superior. Management involves the use of position, power, and some formally structured reward and punishment system.

A review of this literature fails to identify a widely accepted definition that can be used to clearly distinguish leaders from managers. While working in an environment as complicated as hospital pharmacy, the directors will inevitably encounter techological, economical, and social changes. To manage effectively is not to force managers to be leaders, or to force leaders to be managers, but to allow managership and leadership to occur naturally through honest consideration of both perspectives. In this study, the directors of hospital pharmacy are regarded as both managers and leaders with the intent to eliminate confusing ideas about the differences between them. The word "leadership" is used to include both leadership and managership.

Effectiveness vs ineffectiveness

When the leadership style of a director is appropriate to a given situation, it is called effective; when the leadership style of a director is inappropriate to a given situation, it is called ineffective. The difference between the effective and the ineffective styles is not the actual behavior of the leader, but the appropriateness of this behavior to the environment in which it is used.[8] For instance, if there was a situation which required a director to concentrate more on the relationship with his or her

subordinates, but less on the accomplishment of the task, the director who behaved such a way is said to be effective. On the other hand, the director who behaved differently in the same circumstances might be successful, but not effective. Whether the styles discussed in this study are appropriate or not is based on the Situational Leadership Theory introduced by Hersey and Blanchard.

CHAPTER II

REVIEW OF THE LITERATURE

Leadership Research in the Field of Management Science

Looking back from the beginning of this century until now, leadership research has contributed to finding the answer to what distinguishes leaders from nonleaders, and what distinguishes effective leaders from ineffective leaders. Research focused on each approach has provided partial answers to the questions, but none of these approaches provides an adequate and complete answer. No attempt is made in this section to provide a comprehensive review of all the research which has been conducted by behavioral scientists. Several research findings which focus on different perspectives are listed in the following section in order to give an outline of leadership research.

(1) Leadership traits

During the period from 1920 through the 1940s, the most common approach to the study of leadership concentrated on leadership traits per se. Those researchers placed emphasis on the measurement and quantification of leadership traits and the relationship between such traits and leader effectiveness. Studies were made to examine traits such as

height, weight, intelligence, appearance, and creativeness. But these researchers failed to produce even one personality trait or set of qualities that can be used to discriminate leaders from nonleaders. Stogdill reviewed more than 100 such studies and suggested that these researchers may have been addressing the wrong question.[9] While leaders tend to have some advantages over nonleaders in personality traits, there were no characteristics in which leaders were consistently identified as being superior.

(2) Michigan leadership studies

The early studies at the Survey Research Center in the University of Michigan led researchers to describe a leader's behavior along a continuum (one dimension) of employee-centered behavior to production- centered behavior, as illustrated in Figure 1.[10] Leaders who are described as employee-centered emphasize the importance of the relationship with employees and take interest in their personal needs. Leaders with production-centered behavior regard employees as tools to accomplish organizational goals. These studies tried to locate clusters of characteristics related to each behavior and use them to interpret the effectiveness of leaders.

However, further studies conducted at Ohio State University soon stultified the one-dimensional theory and demonstrated that the employee-centered and production-centered behaviors were not opposite ends of a single dimension but were two independent dimensions.

(3) Ohio State leadership studies

The leadership studies at Ohio State University were made in an attempt to identify and describe dimensions of leader behavior through empirical measurement of the behavior of leaders in organizations.[11] Fourteen dimensions of leadership were initially identified. Eventually, only two dimensions were found to be typical: consideration and initiating structure. Consideration involves the degree of two-way communication and consultation between a leader and his or her subordinates, and the amount of mutual trust, respect, and warmth exhibited. On the other hand, initiating structure is defined as a leader who establishes well-defined channels of communication and emphasize methods of accomplishing the group's task.

The major difference between the Michigan studies and the Ohio State studies is that a leader is likely to engage in both dimensions to a varying degree, as illustrated in Figure 2. The most effective leaders tend to be described as high on both dimensions. The two-dimensional model is the most widely used concept in leadership theory and research. It also serves as a basis for the following , more complex, theories.

(4) Managerial grid

After the development of the two-dimensional model, Blake and Mouton introduced the managerial grid which popularized the concept discussed in the two-dimensional model.[12] Five different types of leadership based on concern for production and concern for people are located in four quadrants. Each dimension is divided into nine scales, from bottom 1 to top 9, as illustrated in Figure 3.. The five styles are impoverished management

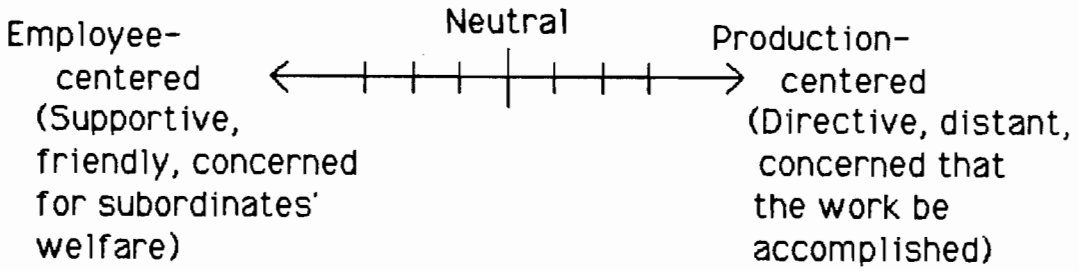

Figure 1. The Single Dimension of Leader Behavior as Defined in the Early Michigan Studies

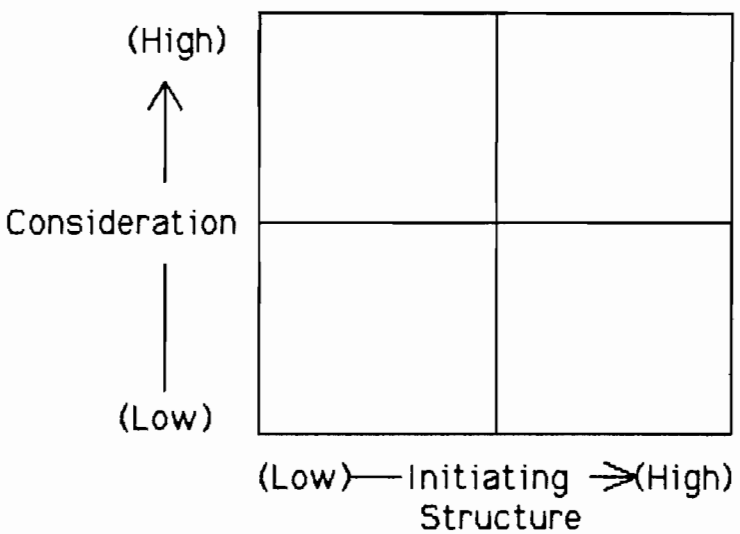

Figure 2. The Two Major Dimensions of Leader Behavior Identified in the Ohio State Studies

(1,1), task management (9,1), middle of the road (5,5), country club management (1,9), and team management (9,9).

The researchers who use the managerial grid presume that there is one "best" style of leadership for all situations and leaders should be trained to lead by that style. They suggest that the high task - high relations (team management) is the best behavior, and should be used in most situations. Furthermore, this style is acknowledged by those researchers as the best way to achieve effectiveness.

(5) Three-dimensional theory

William J. Reddin was the first person to add an effectiveness dimension to the task concern and relationship concern dimensions of the earlier two-dimensional model.[13] This model is illustrated in Figure 4.. Recognizing that there are many effective leadership styles and that the effectiveness of leaders depends on how their style interrelates with the situation in which they operate, Reddin indicated that an effectiveness dimension should be added to the two-dimensional model. He felt that a useful theoretical model should allow that a variety of styles may be effective or ineffective depending on the situation. The difference between the effective and ineffective styles is often not the actual behavior of the leader, but the appropriateness of this behavior to the environment in which it is used. The effectiveness dimension, in reality, is the environment. An attempt was made in the three-dimensional model to integrate the concepts of leader style with situational demands. This attempt led some of the researchers to move into the study of situational leadership.

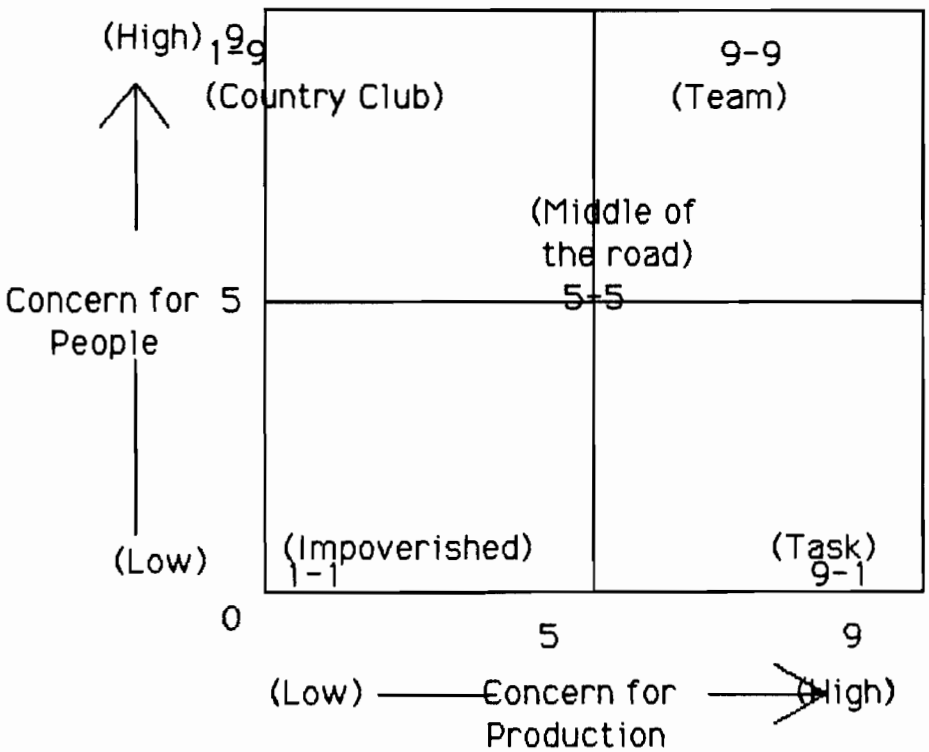

Figure 3. The Managerial Grid

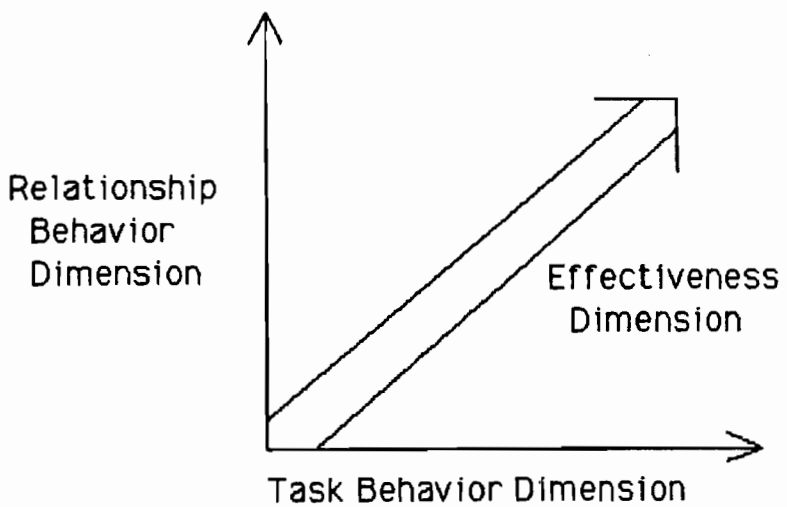

Figure 4. The Three-Dimensional Model

(6) Situational leadership theory

Situational leadership theory, which is an outgrowth of the concept of the three-dimensional model, is introduced by Hersey and Blanchard.[8] They asserted that there is no one best way to influence people in all situations. This model (as shown in Figure 5,) is based on an interaction among (a) the amount of guidance and direction a leader gives (task behavior); (b) the amount of socioemotional support a leader provides (relationship behavior); and (c) the readiness level that followers exhibit in performing a specific task, function, or objective (maturity level of followers). While all the situational variables (leader, followers, superiors, job demands, time, organizational policies, and rules) are important, situational leadership emphasizes the behavior of a leader in relation to followers. It suggests a basic style for different maturity levels in meeting specific conditions, and it may be necessary to change one's style within the four quadrants to deal appropriately with this condition.

Maturity level of followers in situational leadership is defined as (a) job maturity- the ability to perform a specific task and (b) psychological maturity- the willingness and motivation to perform the task. Job maturity is correlated with knowledge and skill, while psychological maturity is correlated with confidence and commitment. They are not directly related to chronological age, but to psychological age. As the maturity level of one's followers continues to grow, the appropriate behavior of a leader not only requires less and less guidance and direction (task concern) but also less and less socioemotional support (relationship concern).

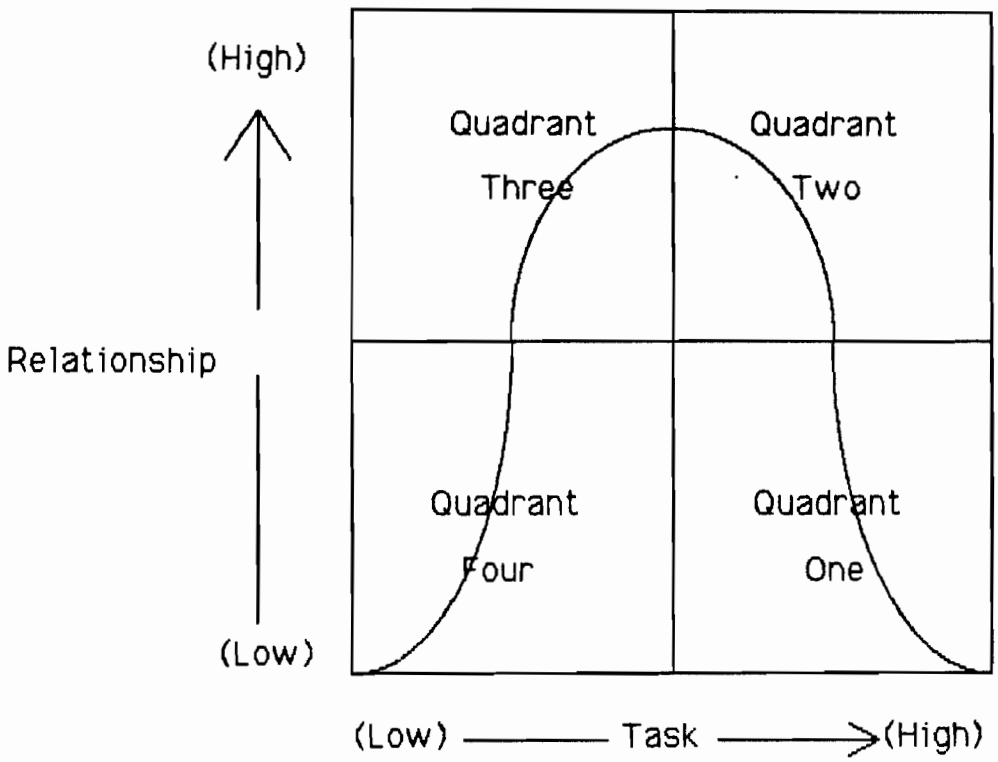

Figure 5. Situational Leadership Model

Leadership Research in the Field of Hospital Pharmacy

In the past two decades, more health professionals of U.S. hospital pharmacies have emphasized the importance of management skills and leadership styles used by the directors. Ray indicates that the next plateau in pharmacy should not be so much a time in which we continue our feverish search for more and more new roles, but a period in which the clinical elements of practice, already identified, become widely accepted and firmly established. Pharmacy directors have a special opportunity and responsibility to bring this about through the imaginative use of management tools and systems at their disposal.[14]

Allen, Burkhart, and Lamy use many fundamental concepts in management science to describe leadership among hospital supervisors. It is concluded, in their study, that many institutional pharmacists are moving toward a participative management structure rather than an authoritarian management structure.[3] They believe that a combination of the two structures would probably be best suited for the institutional pharmacy setting. Authoritarian management structure would allow for continuity and stability within an organization, while participative structure can motivate subordinates, and allow for growth and development.

Parrett et al. use a questionnaire to study the leadership styles of hospital pharmacy directors and find that most hospital pharmacy directors perceived their leadership style as highly relationship-oriented and highly task-oriented.[4] They adopted the method and the Situational Leadership Theory which was introduced by Hersey and Blanchard. The results of their

study have served as a comparison to the results of this questionnaire study, which also used the concepts and the questionnaire developed by Hersey and Blanchard (as discussed in Chapter V in this thesis).

Williams concludes, in his study of achieving excellence in hospital pharmacy, that the management style most likely to be effective in the era of change is one that includes a high regard for both people and production through shared responsibility, high participation, involvement, and commitment.[15] He thinks that one way to help achieve excellence is to add the courses in human behavior, leadership, and management to undergraduate pharmacy curricula.

Pierpaoli indicates in his study that hospital pharmacy directors play a role as the middle managers, who accomplish goals by managing relationships in three dimensions - those of subordinate, equal, and superiors.[16] In order to achieve the maximum good for the total organization, the directors of hospital pharmacy must have sufficient professional knowledge to accomplish tasks, sufficient human skills to work with others, and conceptual skills to recognize the various factors within the environment.

In these studies discussed above, researchers realize that the leadership style exhibited by a hospital pharmacy director has a significant impact on the hospital pharmacy department and the hospital as a whole. It is also indicated in most of the studies that the style of high task - high relationship is the style that is most likely to be effective in managing the hospital pharmacy.

Traditionally, the hospital pharmacy directors in Taiwan have been pharmacists who were educated primarily in biological and pharmaceutical

sciences, with relatively minimal exposure to business management and the behavioral sciences. Pharmacy students rarely have the chance to be trained in any courses related to those fields. Moreover, researchers concentrate much more on developing better drugs than on developing better managers. Almost all the pharmacy graduate students choose pharmacology, pharmaceutics, or pharmaceutical chemistry as their research field. Thus, it is impossible to find a study discussing leadership studies of hospital pharmacies in Taiwan. Hospital pharmacy management is still an extremely new concept to the people in Taiwan.

CHAPTER III

METHODOLOGY

Two 12-item questionnaires were used to characterize the leadership styles of hospital pharmacy directors in Taipei, Taiwan. One questionnaire was sent to the hospital pharmacy directors participating in this study; the other, with questions similar to the one sent to the directors, was sent to each of the three randomly selected pharmacists in each of the participating hospital pharmacies. The results served as a way to detect whether the style reflected in the first questionnaire is the actual behavior, or just the director's perception of a good leader. According to the Situational Leadership Theory, the dominant and supporting styles, the style range, and the style adaptability of each director can be described.

Instrument

The Leader Effectiveness and Adaptability Description (LEAD) instrument developed by Hersey and Blanchard was widely used in business companies and educational institutions where people wanted to understand the leadership behavior of their top managers. The LEAD questionnaire was adopted in this study to describe the leadership behavior of directors in a hospital pharmacy setting. As people get used to interpreting the meaning

of the questionnaire in terms of their working environment, it is necessary to revise the questions into the terminology with which the respondents are familiar. The word "subordinates" was used instead of "group". Group is usually misunderstood as a number of people performing the same tasks, so respondents would probably answer the questionnaire based on the pharmacists who worked in outpatient services as a group, for example, instead of including the pharmacists who take charge of the inventory control. Words such as "organization" were changed to "department" because people regard the hospital pharmacy as a department, not an organization.

It is important to note that there may be a difference between the leader's perception of a good leader and the leader's actual behavior. For this reason, two LEAD instruments were used: LEAD-Self and LEAD-Other. The LEAD-Self was used to measure self-perception of how a director behaves as a leader. The LEAD-Other was used as a way to detect whether the style reflected in the LEAD-Self is the actual behavior or just the director's perception of a good leader. One's self-perception may or may not reflect actual leadership style, but comparing the results from these two questionnaires is useful to see how close a person's perceptions are to the perception of others. These two questionnaires were originally designed in English. After being approved by the supervisory committee, the questionnaire was translated into Chinese. A pilot test was conducted with four Chinese-speaking people in order to make sure that the sample subjects would have no problem in understanding the questions.

The LEAD-Self questionnaire contains 12 leadership situations in which directors were asked to select from four alternative actions, the one that

they felt would most closely describe their behavior in the given situation. Each alternative combines task-oriented and relationship- oriented behavior in one of four patterns: high task-low relationship, high task-high relationship, low task-high relationship, low task-low relationship.

The LEAD-Other questionnaire also contained 12 leadership situations similar to the LEAD-Self questionnaire. It was sent to each of three randomly selected pharmacists in each of the participating hospital pharmacies. These pharmacists were asked to answer the questions according to their perception of their director's style, not their own.

The LEAD-Self questionnaire, a cover letter, and a stamped envelope were mailed to each selected director. Each pharmacist received the LEAD-Other questionnaire, plus a cover letter, and a stamped envelope, 45 days after the mailing day of the LEAD-Self questionnaire. A follow-up contact was made if the reponse had not been received after 30 days. The purpose of sending the two questionnaires at separate times was to avoid the comparison between the director and the pharmacists in the same hospital pharmacy while answering the questions.

Sample

Most of the large hospitals, with 150 beds or more, are located in Taipei, in the northern part of Taiwan, which is the largest city in Taiwan. Although there were 28 such hospitals at the time the study was made, 20 was selected as a representative number of these hospitals. Therefore, 20 directors who take charge of such hospital pharmacies were randomly selected in the study. The expected response rate was 70%. In order to obtain this response rate, a telephone call was made to each of the 20

directors prior to the mailing day of the LEAD-Self quesionnaire. Fifteen responses, which represented 70% of the response rate, were received within 25 days after being mailed.

Three pharmacists were randomly selected from each of the 15 hospitals whose director responded to the questionnaire. Having had each director's approval and assistance, 93.3% response rate to the second questionnaire was achieved.

Smaller hospitals were not selected because of their lack of a formally organized system. Instead of hiring a formal director, most small hospitals keep only several pharmacists and technicians to take care of the routine work. No one person is able to influence the activities of others for long. Therefore, leadership is not exercised consistently by any specific person. Even if there is a person who is regarded as the informal leader, it is beyond the purpose of this study to discuss them all.

Method of Analyzing Results

An individual's style of leadership is the consistent behavior pattern that the person exhibits when attempting to influence the activities of others -- as perceived by those others. As a result of the questionnaire responses, there are three aspects of a leader's behavior that can be described: (1) style, (2) style range, and (3) style adaptability.[8]

There are two styles that most leaders have: the dominant style and the supporting style. The dominant style is the style which the leader uses most often when attemping to influence the activities of others. The supporting style is the one which the leader tends to use on most other occasions. The dominant style and the supporting style of each director can

be determined by circling, in Table 1, the letter of the alternative action each director chooses for each situation; and then totaling the number of times an action appeared in each of the four subcolumns. According to the Situational Leadership Theory, three of the situations in the LEAD-Self questionnaire demand a high task - low relationship action, which is represented in subcolumn 1; three require a high task - high relationship action, which is represented in subcolumn 2; three require a low task - high relationship style, which is represented in subcolumn 3; and finally, three demand low task - low relationship style which is represented in subcolumn 4. The subcolumn which has the most responses indicates the dominant style. The second highest number that appears reflects the supporting style.

Table 2 was used to analyze both the dominant and the supporting styles of the LEAD-Other questionnaire, which was the perceptions of the pharmacists toward their director's style.

Style range is determined by adding the scores of the dominant style and the supporting style. For example, if a leader's dominant style is high task - high relationship (represented at subcolumn 2 where six responses fell) and his or her supporting style is high task - low relationship (represented at at subcolumn 1 where three responses fell), then the style range of this leader was 9 (6+3). Style range describes to which extent the leader is able to vary his or her leadership style. A wide range will not guarantee the effectiveness of a leader. A leader with a wide range of behaviors can be ineffective if these behaviors are not consistent with the demands of the situation. In other words, a leader with a narrow style range can be effective if this person remains in situations in which his or

Table 1. Determining Leadership Style and Style Range of LEAD-Self Questionnaire

	(Style Range) Alternative Actions			
	(1)	(2)	(3)	(4)
Situations				
1	A	C	B	D
2	D	A	C	B
3	C	A	D	B
4	B	D	A	C
5	C	B	D	A
6	B	D	A	C
7	A	C	B	D
8	C	B	D	A
9	C	B	D	A
10	B	D	A	C
11	A	C	B	D
12	C	A	D	B
Subcolumns				

Table 2. Determining Leadership Style and Style Range of LEAD-Other Questionnaire

	(Style Range) Alternative Actions			
	(1)	(2)	(3)	(4)
Situations 1	C	B	A	D
2	D	A	B	C
3	C	B	D	A
4	A	B	D	C
5	C	B	A	D
6	B	A	D	C
7	D	B	C	A
8	C	B	D	A
9	B	C	A	D
10	B	C	A	D
11	D	B	A	C
12	C	A	D	B
Subcolumns				

her style has a high probability of success. It can be used only as an indication of the flexibility of a leader. A flexible leader is more likely to be effective in different situations.

Style adaptability indicates the degree to which leaders are able to vary their styles appropriately to the demands of a given situation. The style adaptability can be determined by circling, in Table 3, the scores of the corresponding answers from the LEAD-Self questionnaire, and then calculating the total score. According to the theory of Situational Leadership, from among the four alternative actions in the given situation, a leader's behavior with the highest probability of success is given a +2. The second best action is given a +1 and the third one is a -1. The one with the lowest probability of success is given a -2. Thus a director who picked the alternative with the highest probability in all situations would have a +24 effectiveness score. The score of style adaptability ranges from +24 (the most effective score) to -24 (the least effective score).

Table 4 was used to determine the style adaptability of the LEAD-Other questionnaire. The more 'plus' scores the leader has -- as perceived by the pharmacists -- the more effective he or she is seen by the pharmacists to lead the department.

Comparing the results from the LEAD-Self and the LEAD-Other questionnaires, the leadership styles that are used by hospital pharmacy directors in Taipei, Taiwan, are described in the following chapter.

Table 3. Determining Style Adaptability of LEAD-Self Questionnaire

	(Style Adaptability) Alternative Actions			
	(A)	(B)	(C)	(D)
Situations 1	+2	-1	+1	-2
2	+2	-2	+1	-1
3	+1	-1	-2	+2
4	+1	-2	+2	-1
5	-2	+1	+2	-1
6	-1	+1	-2	+2
7	-2	+2	-1	+1
8	+2	-1	-2	+1
9	-2	+1	+2	-1
10	+1	-2	-1	+2
11	-2	+2	-1	+1
12	-1	+2	-2	+1
Subtotal				

Total =

Table 4. Determining Style Adaptability of LEAD-Other Questionnaire

	(Style Adaptability) Alternative Actions			
	(A)	(B)	(C)	(D)
Situations				
1	+2	-1	-2	+1
2	+1	-1	-2	+2
3	+2	-1	-2	+1
4	-2	+1	-1	+2
5	-1	+2	+1	-2
6	+2	-2	-1	+1
7	+2	-1	+1	-2
8	-2	+1	+2	-1
9	+2	-2	-1	+1
10	-1	+2	+1	-2
11	+1	+2	-2	-1
12	-1	+2	-2	+1
Subcolumns				

Total=

CHAPTER IV

RESULTS AND DISCUSSION

The most frequent dominant leadership style used by hospital pharmacy directors in the Taipei area was high task - high relationship. This result was consistent with the findings of Parrett et al. who studied the leadership styles used by directors in U.S. hospital pharmacies.[4]

The dominant leadership style and the mean score of style adaptability from the LEAD-Other questionnaire are similar to those obtained from the LEAD-Self questionnaire. It indicates that the results from the LEAD-Self questionnaire are not just the directors' self-perception of their own leadership styles, but the styles actually exhibited by the directors.

Results Derived from LEAD-Self Questionnaire

Twenty hospital pharmacy directors who are in charge of hospitals with 150 beds or more in Taipei area were randomly selected as samples in this study. Of the 20 questionnaires sent, 15 were returned, yielding a 75% response rate. Although protection of the respondent's rights was mentioned on the cover page of the questionnaire, guaranteeing that the respondent's name would not be announced or printed anywhere in this thesis, five did not respond. Among the 15 directors who responded, eight were men and seven were women. They ranged in age from 31 to 55 years.

Nine of the 15 directors had a B.S. degree, one had an M.S. degree, and five had a Ph.D. degree. Background information, including type of hospital, number of patient beds, staff size, gender and age of the director, educational degree of the director, and the amount of time the director had been at his or her present job in each hospital is shown in Table 5.

Responses to the LEAD-Self questionnaire indicate that the most frequent dominant leadership style, based on the responses from the hospital pharmacy directors themselves, is high task - high relationship (11 directors or 73.3%), which corresponds to style 2 as shown in Figure 6. A high task - low relationship style is dominant for two directors (13.3%), corresponding to style 1; and one (6.7%) is identified as having a low task - high relationship style (corresponding to style 3). No director is identified as having a low task- low relationship dominant style (corresponding to style 4). One director (6.7%) has an equally high score for two styles: high task - low relationship and high task - high relationship.

Compared with the study of Parrett et al., it is found that the most frequent dominant style used by hospital pharmacy directors in both Taiwan and the U.S. (268 directors or 67.5% out of 397 respondents) is the same, that of the high task - high relationship.[4] The dominant style which appears second in frequency among the U.S. directors (72 directors or 18.1%) is the low task - high relationship. Third, five (1.3%) are identified as having a high task - low relationship (as shown in Figure 7). No director is identified as having a low task - low relationship dominant style. Forty-one directors (10.3%) have equally high scores for two or more styles and 11 failed to answer one or more of the leadership questions.

Table 5: Background Information of the Hospitals

HOSPITALS:	1	2	3	4	5	6	7	8
Hospital Type								
Teaching hospital	*	*	*	*	*	*	*	*
Private hospital	*	*	*	*		*	*	*
Government hospital					*			
University hospital		*			*			
Number of Patient Beds								
<200	*		*			*		*
201-500		*		*				
501-1,000								
1,001-2,000					*			
>2,000							*	
Staff Size								
Pharmacists	12	12	5	8	52	7	46	7
Technicians	3	1	1	5	30	2	10	2
Total	15	13	6	13	82	9	56	9
Gender of Director								
Male	*	*			*		*	
Female			*	*		*		*
Degree of Director								
B.S.	*		*	*		*		*
M.S.								
Ph.D.		*			*		*	
Time at Present Job								
<1 year				*				
1-5 year	*	*	*		*		*	
6-10 year						*		*
>11 year								
Age								
26-30								
31-40	*		*			*		*
41-50		*					*	
>51					*			

Table 5: Cont.

HOSPITALS:	9	10	11	12	13	14	15
Hospital Type							
Teaching hospital	*	*	*	*	*	*	*
Private hospital	*	*		*		*	*
Government hsopital			*		*		
University hospital				*			*
Number of Patient Beds							
<200					*		
201-500	*	*				*	*
501-1,000				*			
1,001-2,000							
>2,000			*				
Staff Size							
Pharmaicsts	26	15	80		5	21	12
Technicians	3	0	20		2	6	4
Total	29	15	100		7	27	16
Gender of Director							
Male		*	*	*			*
Female	*				*	*	
Degree of Director							
B.S.	*	*				*	*
M.S.					*		
Ph.D.			*	*			
Time at Present Job							
<1 year							
1-5 year					*	*	
6-10 year	*	*	*	*			*
>11 year							
Age							
26-30							
31-40					*	*	*
41-50	*	*					
>51			*				

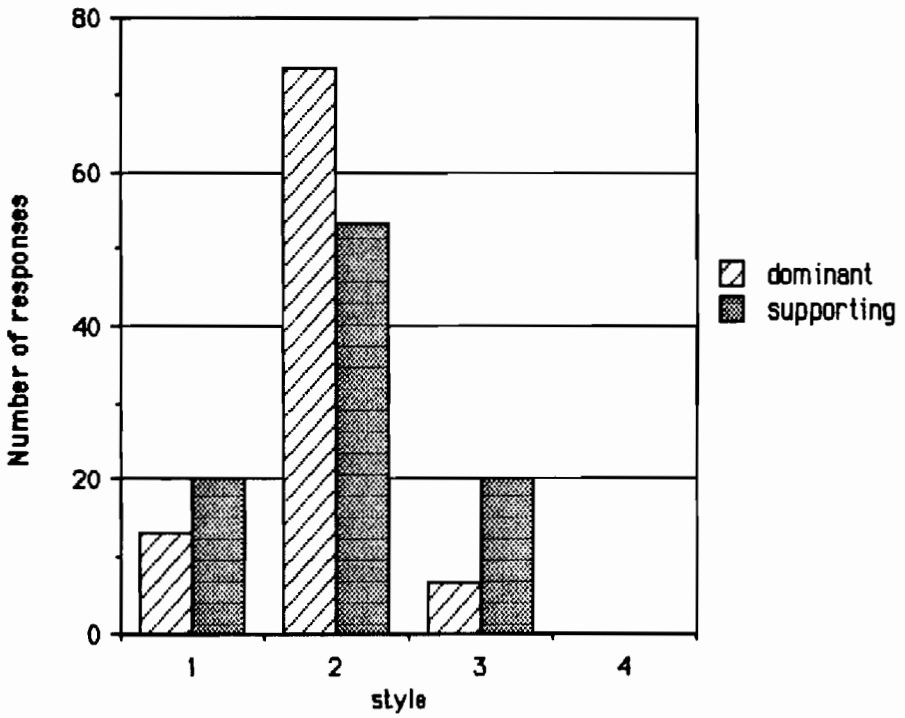

Figure 6. Dominant Style and Supporting Style of the Directors

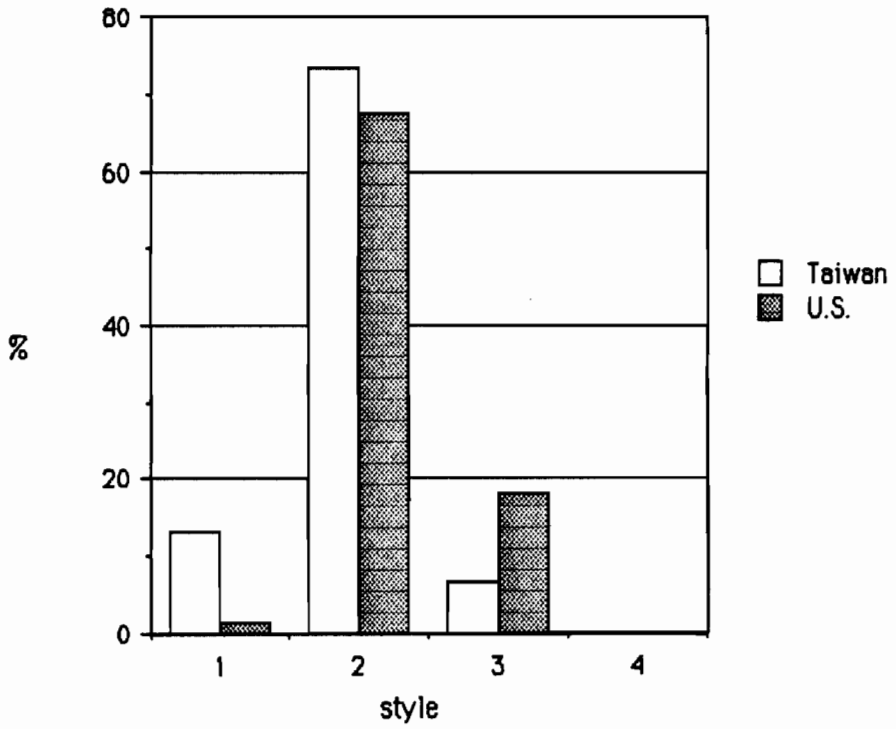

Figure 7. Comparing the Dominant Style Between Taiwan and U.S.

The differences in the results of the second and the third dominant style, comparing the study of the U.S. directors made by Parrett et al., as opposed to the results found in the study made of the directors of Taiwan, might be due to the different belief systems of the two countries. The Chinese are greatly influenced by Confucianism, so it is more important for them to keep a harmonious order in their working environment, than for the Americans, who have been affected by individualism for decades. Thus, in the Taiwanese system, a high task - low relationship style is easier to implement than a low task - high relationship style.

According to the responses to the LEAD-Self questionnaire, the most frequent supporting style is low task - high relationship (eight directors or 53.3%). Three (20.0%) are identified as having a high task - low relationship and three have high task - high relationship styles. None is identified as having a low task - low relationship style (as shown in Figure 6).

The style range of each director can extend from the widest (12) to the narrowest (6). The distribution of the style ranges of directors in Taiwan is skewed to the left (as shown in Figure 8). Most of the responses (six directors or 40.0%) fall into style range 9. Four directors (26.7%) have style range 10, four had 11, and one (6.6%) has 8. The mean style range is 9.73.

In general, the hospital pharmacy directors in the Taipei area have a wide style range. The wide style range indicates that the directors are more likely to be effective in different situations, and even if the scores of the style adaptability of the directors are low, a shorter period of time is needed to increase their effectiveness, than is needed with people who

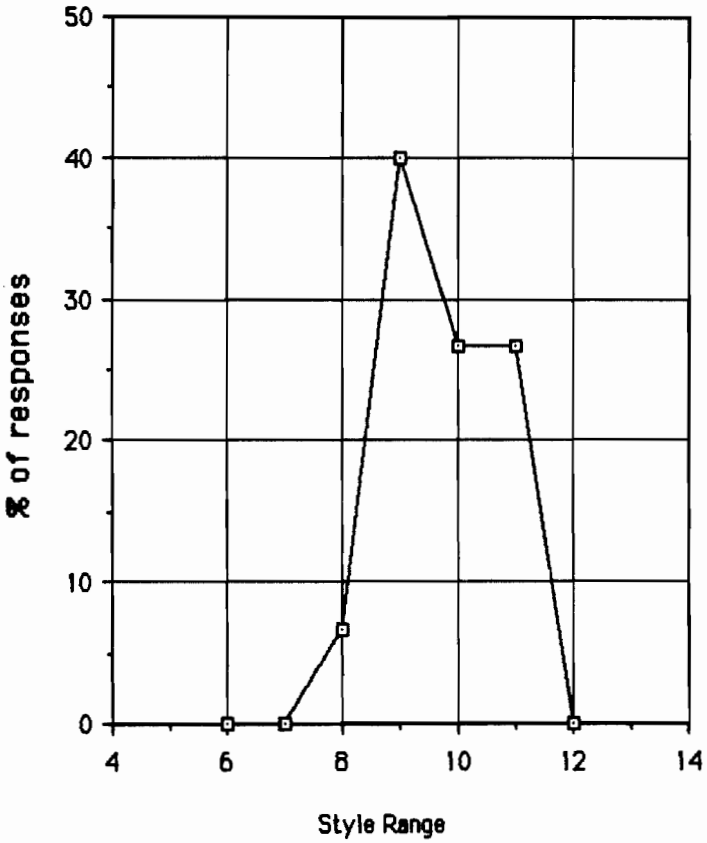

Figure 8. Style Range of the Directors

have a narrow style range. Teaching directors knowledge and diagnostic skills in leadership requires much less time than teaching them to feel comfortable in using different styles.[8]

The score of style adaptability (with the most effective score, +24, to the least effective score, -24) in the responses from the LEAD-Self questionnaire ranges from +12 to -6 (as displayed in Table 6). The mean score of style adaptability is +3.47.

Results Derived from LEAD-Other Questionnaire

The LEAD-Other questionnaire was sent to each of three randomly selected pharmacists from each of the 15 responding hospital pharmacies. Having had each director's approval and assistance, and a follow-up contact 30 days after the mailing day of the LEAD-Other questionnaire, a 93.3% response rate was achieved (three did not respond to the questionnaire).

Table 6 : Style Adaptability of the Directors
(From LEAD-Self Questionnaire)

Score of Style Adaptability	+12	+11	+9	+7	+6	+5	+3	-1	-2	-3	-6
Number of Respondent	2	1	1	1	1	2	1	1	1	1	2

Mean = +3.47

Among the 15 hospital pharmacies, comparing the directors' self-perception of their dominant styles with the pharmacists' perception of the directors' dominant styles, only three (20.0%) are the same (that of the high task - high relationship style). In four hosptial pharmacies (26.7%) the director's perceptions are the same as those of two of the three pharmacists', also of the high task - high relationship style. Of four hospital pharmacies (26.7%) where each director's perceptions are the same as only one pharmacist's perception, two have a high task - high relationship style, and two have a high task - low relationship style. Two directors (13.3%), one with a high task - high relationship style, and the other with an equally high score for the high task - high relationship style and the high task - low relationship style, have not even one similar response to any of the three chosen pharmacists. A comparison could not be made of two hospital pharmacy directors (13.3%) because all the LEAD-Other questionnaires were not returned (one had two responses returned, the other had only one).

Of the 42 pharmacists who responded to the LEAD-Other questionnaire, six (14.3%) perceive their directors' dominant style as high task - low relationship (style 1, as shown in Figure 9.). A high task - high relationship style (style 2) is perceived as the dominant style of the directors' by 25 pharmacists (59.5). A low task - high relationship style (style 3) is perceived as dominant by three pharmacists (7.1%), and a low task - low relationship style (style 4) is perceived by two pharmacists (4.8%). Six pharmacists (14.3%) perceive their director as having an equally high score for two styles. This result is consistent with the result from the LEAD-Self questionnaire.

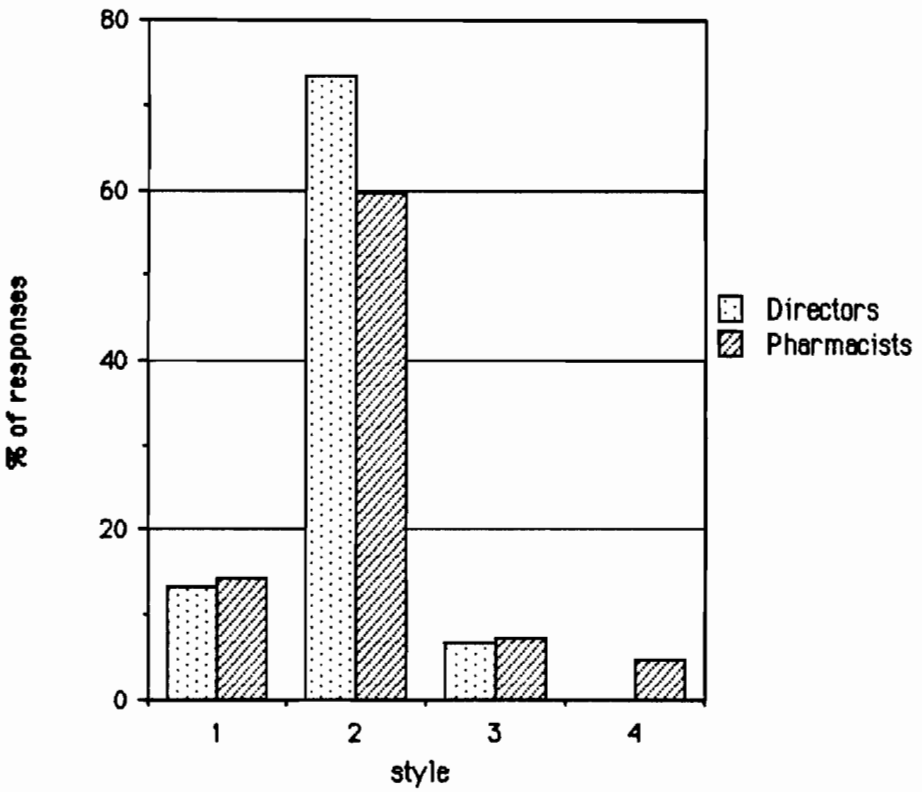

Figure 9. Dominant Style Perceived by Directors and Pharmacists

The score of each director's style adaptability as perceived by each participating pharmacist is indicated in Table 7. The mean score of the style adaptability, which is determined by calculating the total score of 42 pharmacists and dividing the total score by 42, was +3.33. This score is approximately the same as the score obtained from the LEAD-Self questionnaire, which was +3.47. The similarity of the results of the dominant style and the style adaptability from the two questionnaires indicates that the result from the LEAD-Self questionnaire is not just the directors' self-perception of their leadership style, but the actual styles exhibited by the directors.

Another way to examine the result is to look at the mean difference of each hospital pharmacy respectively. The difference between the director's perception (D) and the pharmacist's perception of their director (P) is determined by the absolute value of D-P. Mean difference is obtained by dividing the sum of the total difference in each hospital pharmacy by three (three pharmacists). A larger mean difference indicates a greater difference between the directors' perceptions of their own style adaptability and of the pharmacists' perceptions of the directors. A smaller mean difference indicates the director's perception of the style adaptability is closer to the pharmacist's perception of the director.

The Impact of the Background Factors to the Leadership Style

Except for the gender of the director and the educational degree of the director, no correlation is found between the director's style and the factors listed in the background information.

Table 7 : Comparing the Style Adaptabilty of the Directors' Perceptions with the Pharmacists' Perceptions of the Directors

Hospital	D	P	ID-PI	Mean Difference
1	+12	+1	11	*
		-2	14	
		*	*	
2	-6	0	6	3.7
		-6	0	
		-1	5	
3	-3	+9	12	6.7
		+5	8	
		-3	0	
4	+12	0	12	12.0
		+2	10	
		-2	14	
5	+3	-7	10	8.0
		-1	4	
		+13	10	
6	+11	0	11	*
		*	*	
		*	*	
7	-6	+6	12	12.0
		+2	8	
		+10	16	
8	+9	+1	8	3.7
		+10	1	
		+7	2	

* : no response

Table 7 :Cont.

Hospital	D	P	ID-PI	Mean Difference
9	+7	+14	7	5.7
		+12	5	
		+12	5	
10	+5	+9	4	2.0
		+5	0	
		+7	2	
11	-2	-3	1	1.7
		-3	1	
		+1	3	
12	+6	+7	1	3.0
		-1	7	
		+7	1	
13	+5	+8	3	4.0
		+9	4	
		0	5	
14	-1	+8	9	5.7
		-2	1	
		+6	7	
15	+10	-6	16	11.0
		+2	8	
		+1	9	

Mean = 140/42 = 3.33

Of the 15 directors who responded, eight are men and seven are women. Six of the seven women (85.7%) are identified as having the high task - high relationship style, and one (14.3%) is identified as having a low task - high relationship style. Of the eight men, five (62.5%) are identified as having a high task - high relationship style; two (25.0%) are identified as having a high task - low relationship style; and one (12.5%) is identified as having equally high score of high task - high relationship style and high task - low relationship style. These results show that the female directors tend to be more concerned about the relationship with their subordinates than do the male directors.

The mean score of the style adaptability of the female directors is +5.71. However, the mean score of the style adaptability of the male directors is +2.75. This indicates that the male directors are less effective than the female directors in dealing appropriately with the demands of the working environment.

Among the 15 directors who responded to the LEAD-Self questionnaire, nine have a B.S. degree, one has an M.S. degree, and the other five have a Ph.D. degree. Of the nine who have a B.S. degree, eight are identified as having the high task - high relationship style, and one is identified as having a low task - high relationshp style. The director who has the M.S. degree is identified as having a high task - high relationship style. Of the five directors who have a Ph.D. degree, two have the high task - low relationship style, two have high task - high relationship style, and the other has an equally high score of both the high task - low relationship style and high task - high relationship style. It showed that the directors who have a higher educational degree tended to use a leadership style more

task- oriented and less people-oriented.

The educational degree of the director has a negative impact on the style adaptability exhibited by the director. Of the nine directors who have a B.S. degree, the mean score of the style adaptability is +6.89. The mean score of the style adaptability of the director who has an M.S. degree is +5. However, the mean score of the style adaptability of the directors who have a Ph.D. degree is -1. It seems that the higher the educational degree the director has, the lower the mean score of the style adaptability the director exhibits.

CHAPTER V

CONCLUSION

Since dispensing and the distribution of drugs is the major task performed by hospital pharmacists in Taiwan, the question has been asked as to what else a pharmacist can do. More and more hospital pharmacy directors are beginning to be concerned and to seek the diversification of pharmacy practice. Thus a unit-dose system, an information center, and a decentralized pharmacy structure have been implemented in a few hospitals over the last 10 years. These programs allow pharmacists to reestablish their professional status and fulfill their job satisfaction by performing new tasks in addition to dispensing and distribution. Although these programs are needed for pharmacists to step out from the traditional working structure, they have not been widely accepted and implemented in many hospital pharmacies during these past 10 years.

The idea of providing clinical services, which the American hospital pharmacies started some 20 years ago, has been taken into consideration by the hospital pharmacy directors in Taiwan. Therefore, with the current programs not fully developed in the few hospitals that have already implemented them, and the new program not well-organized in the hospitals that are considering them, hospital pharmacy practice becomes more complicated. It is necessary for directors to step back and pay

attention to their management practices in order to step forward in an organized and stable way.

This study explored the leadership styles exhibited by the hospital pharmacy directors in Taipei, Taiwan, based on the leadership study of management science developed in the U.S.A.. Basically, the essence of human nature is the same no matter what the nationality. The theory which was adopted in this study is applicable to the Taiwanese system.

The most frequent dominant leadership style of hospital pharmacy directors in the Taipei area is high task - high relationship. This result is consistent with the findings of Parrett et al. who studied the leadership styles used by directors in U.S. hospital pharmacies. Compared with the results from the LEAD-Other questionnaire, it indicates that the results from the LEAD-Self questionnaire are not just the directors' perception of their own leadership style, but the styles actually exhibited by the directors.

According to the results shown in the section of "The impact of the background factors to the leadership style," the directors who exhibit the style of low task - high relationship tend to have a higher score of style adaptability than those who exhibit the style of high task - low relationship. The score of style adaptability implies the effectiveness of the director, the higher the better. Although differences exist in the belief systems and the cultural backgrounds of Taiwan and the U.S.A., the philosophy of managing a hospital pharmacy, it is assumed, is not significantly different. For the directors who are concerned about the effectiveness of their department, this study might serve as an initiative for them to assess their management practice.

The results of this study were based on the responses from 15 participating hospital pharmacy directors and 42 participating pharmacists. Although the study was carefully designed to eliminate possible problems, biases are still inevitable to some extent. Further study can be made to include the same size hospitals as the study in other areas of Taiwan, or to compare the leadership styles used in larger hospitals with those of smaller hospitals. These comparisons will be useful for administrators of health care systems to improve pharmacy practice in hospitals.

Since the instruments used in this research were the LEAD-Self and LEAD-Other questionnaires, further studies can be made by implementing another instrument to measure the maturity level of the pharmacists.[8] Using the results found in this research and the findings from the maturity level of the pharmacists, a training program to teach the directors to use the most appropriate leadership style could be set up to increase their effectiveness. An effective leader is the foundation of the success of hospital pharmacy practice, and by understanding the phenomenon of leadership, the effectiveness of a leader can be improved.

REFERENCES

1. Department of Health, The Executive Yuan, Republic of China. Health and Medicine in Taiwan Area, Republic of China; July 1985.

2. National Health Advisory Council, Ninth meeting, the Department of the Executive Yuan, Taiwan, R.O.C.; 1987; (March 23): 18-9.

3. Allen SJ, Burkhart VP, Lamy PP. Administrative concerns in institutional pharmacy. Hospital Pharmacy. 1978; 13:51-7.

4. Parrett EE, Hurd PD, Northcraft G, McGhan WF, Bootman JL. Leadership styles of hospital pharmacy directors. American Journal of Hospital Pharmacy. 1985; 42:1069-73.

5. Zaleznik A. Managers and leaders: Are they different?. Harvard Business Review. 1977; 55: 67-78.

6. Plachy RJ. Leading vs managing: A guide to some crucial distinction. Management Review. 1981; 70: 58-61.

7. Jago AG. Leadership: perspective in theory and research. Management Science. 1982; 28: 315-6.

8. Hersey P, Blanchard KH. Management of organizational behavior: Utilizing human resources. 4th ed. Englewood Cliffs, NJ: Prentice-Hall; 1982.

9. Stogdill RM, Coons AE. Leader behavior: Its description and measurement. Columbus, OH: Bureau of Business Research, Ohio State University; 1957.

10. Katz D, Maccoby N, Morse NC. Productivity, supervision, and morale in an office situation. Ann Arbor, MI: Institute for Social Research, The University of Michigan; 1950.

11. Fleishman EA, Harris EF, Burtt HE. Leadership and supervision in industry. Columbus, OH: Bureau of Educational Research, Ohio State University ; 1955.

12. Blake RR, Mouton JS. The managerial grid. Houston, TX: Gulf; 1964.

13. Reddin WJ. The 3-D management style theory. Training and Development Journal. 1967; (April): 8-17.

14. Ray MD. Administrative direction for clinical practice. American Journal of Hospital Pharmacy. 1979; 36: 308.

15. Williams RB. Achieving excellence. American Journal of Hospital Pharmacy. 1986; 43: 617-24.

16. Pierpaoli PG. Management diplomacy: Myths and methods. American Journal of Hospital Pharmacy. 1987; 44: 297-304.